REMARKS

In response to the Official Action of August 28, 2003, claims 1, 4 and 10 have been amended and claims 18-25 have been added. For the reasons set forth below, it is believed that the claims of the present application as amended are in condition for allowance.

Referring now to paragraph 1 of the Official Action, applicant did elect without traverse the claims in Group I, i.e., claims 1-10 directed to a body for an electrodeless lamp.

With respect to paragraph 2 of the Official Action, the reference at page 3, line 28, to "Figure 5" has been deleted.

Referring now to paragraphs 3 and 4 of the Official Action, it is respectfully submitted that claims 1-3 and 6-9, as amended, are not anticipated under 35 USC §102(b) in view of U.S. Patent No. 5,592,048 (Wei et al.). As set forth at paragraph 4 of the Official Action, Wei et al. is directed to an arc tube electrodeless high-pressure sodium lamp. As seen in the detailed description at column 2, lines 8-39, and accompanying figures 1 and 2, the electrodeless arc tube 10 disclosed in Wei et al. comprises a substantially tubular, translucent body 12 and a pair of end-seals 14, each of which comprises an alumina disc 16 sealed within the body 12. As specifically set forth at column 4, lines 24-28, the insertion of the disc 16 within the body 12 is sealed within the body by a compression or fritless seal as disclosed in U.S. Patent No. 4,545,799. The '799 patent shows in its figures 1 and 2 and corresponding description at column 2, lines 18-26, that

> "The unsintered insert 12 is inserted in each end of the unsintered tube 11. The assembly is heated in an atmospheric furnace until both tube 11 and insert 12 are partially sintered. During sintering the diameter of tube 11 shrinks more than that of the insert 12. The tube 11 deforms slightly about the insert. As is known in the prior art, this procedure results in a bond at the tube-insert interface 16."

It is clear, therefore, that the body 12 in Wei et al. and the disc 16 are sealed to one another using the method of the '799 patent, which as noted above uses a process in which the body and disc are partially sintered so that the tube (body) shrinks more than that of the insert (disc). As set forth in amended claim 1, the translucent window and the body preform are made into a coherent unit as a result of the window being pressed onto the preform when green and the window being

united to the preform on firing of the ceramic material for sintering the body preform. It is therefore disclosed and claimed in amended claim 1 that the formation of the coherent body for an electrodeless lamp employs sintering, not partial sintering as set forth in Wei et al. and the incorporated-by-reference '799 patent. Furthermore, the body of the present invention as set forth in amended claim 1 has an aperture in the sintered preform for charging the excitable material into the hollow body. In Wei et al., the body is a tube 10 open at both ends and having disc 16 inserted at each end of the tube. The Examiner takes the position that the body (body preform) in Wei et al. is the combination of what Wei et al. calls a body 12 and the disc 16. If this is a body preform as suggested by the Examiner, this body preform is not a body preform of sintered ceramic material since the process used in Wei et al. (using the '799 method) does not make a sintered preform until after the excitable material is inserted within the body. Thus, Wei et al. does not disclose or suggest a sintered body which has an aperture for filling the hollow body, but rather a tube with disc ends, at least one of which has an aperture for filling the tube with excitable material. Thus the product disclosed in Wei et al. describes a halfway product where the body and the end plug have been preliminarily heated to shrink the tube onto the end plug but not sintered to its final state. The sintering comes later with the fill inside. This is made clear in the '799 patent at column 2, lines 27-32, wherein it is stated that after the partial sintering of the tube and insert, the assembly is heated until both tube 11 and insert 12 are fully sintered after the feedthrough 13 is positioned in the insert 12. It is therefore clear that the technique employed by Wei et al. by reference to the '799 patent only performs the complete sintering of the electrodeless body after the fill material has been placed within the body, unlike the present invention as claimed.

Furthermore, with reference to claim 2 which depends on claim 1, it is respectfully submitted that Wei et al. does not disclose or suggest a preform which has a stepped recess at one end for receiving the window. What the Examiner references as "26" in Wei et al. is the sealing frit 26. In the configuration shown in figure 1, the second disc 24 is inserted into the recess formed by first disc 16 and the end 18 of body 12 and is then sealed by the sealing frit which can be in the form of a ring positioned between the outer surface 28 of the second disc and the inner surface 30 of the body (see column 2, lines 33-38). It is not seen that the ring of sealing frit 26 in Wei et al.

corresponds to a stepped recess at one end of the body preform as set forth in claim 2. Furthermore, since claim 2 depends from amended claim 1 which is believed to be distinguished over Wei et al., claim 2 is further believed to be distinguished over Wei et al.

Furthermore, dependent claims 3, 6, 7, 8 and 9 are believed to be distinguished over Wei et al. due to their dependency from amended claim 1, which is believed to be distinguished over Wei et al.

Referring now to paragraph 5 of the Official Action, claims 4 and 10 have been rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Claim 5 is also believed to be allowable since it now depends from claim 4, which is rewritten in independent form.

New claims 18-25 are also believed to be distinguished over Wei et al. for the reasons set forth below. More particularly, with respect to new independent claim 18, this claim defines a body for an electrodeless lamp of ceramic material containing an excitable material in which a body preform and a translucent window on the body are a coherent unit resulting from the window having been pressed onto the preform when green and the window having been united to the preform on firing of the ceramic material for sintering the body preform. Furthermore, claim 18 defines an aperture in the sintered preform for charging the excitable material into the hollow body, wherein the aperture has a surrounding formation which is collapsible on laser radiation to seal the aperture. For the reasons set forth above with regard to amended claim 1, this claim is believed to be distinguished over Wei et al. Furthermore, Wei et al. neither discloses nor suggests an aperture in a sintered preform for charging the excitable material into the hollow body which has a surrounding formation which is collapsible on laser radiation so as to seal the aperture. For these reasons, claim 18 and dependent claims 19-21 are believed to be distinguished over Wei et al.

New claims 22-25 all ultimately depend from amended claim 1, and for the reasons set forth above are believed to be distinguished over Wei et al. Furthermore, claim 25 defines that the aperture in the preform has a surrounding formation which is collapsible on laser radiation to seal the aperture and that the aperture is at an end of the preform opposite from the window. Such elements of an electrodeless lamp are neither disclosed nor suggested by Wei et al.

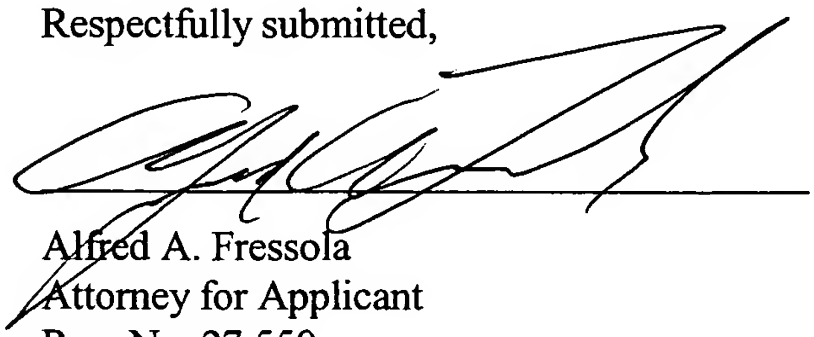
Referring now to paragraph 6 of the Official Action, it is respectfully submitted that the prior art made of record and not relied upon, taken alone or in combination with the previously cited art, neither discloses nor suggests the claims of the present application. More particularly, U.S. Patent No. 6,310,443 (MacLennan et al.) discloses a jacketed lamp bulb envelope which has a bulb portion 5 which is inserted in a reflective ceramic cup 11 and positioned symmetric with respect to an aperture 13. This reference does not disclose or suggest a body preform of sintered ceramic material defining the shape of the body which is hollow and a translucent window on the body wherein the window and the preform are a coherent unit resulting from the window having been pressed onto the preform when green and the window having been united to the preform on firing of the ceramic material for sintering the body preform, and further wherein the body has an aperture in the sintered preform for charging the excitable material into the hollow body. U.S. Patent No. 4,927,217 (Kroes et al.) discloses an electrodeless low-pressure discharge lamp which has a glass discharge vessel 1 which is sealed in a vacuum-type manner. The disclosed lamp is not in any way suggestive of the body for the electrodeless lamp as recited above with regard to independent claims 1, 4, 10 and 18, as well as the dependent claims thereto. U.S. Patent No. 5,438,235 (Sommerer et al.) discloses an electrostatic shield to reduce wall damage in an electrodeless high-intensity discharge lamp. Although a typical electrodeless HID lamp 10 is shown, this lamp neither discloses nor suggests the body for an electrodeless lamp as set forth in independent claims 1, 4, 10 and 18, as well as the dependent claims thereto.

U.S. Patent No. 5,637,963 (Inoue et al.) is directed to an electrodeless lamp having a narrow gap between a sealed tube and the arc chamber so as to form a consistent cold spot. The lamp described does not disclose or suggest the body of an electrodeless lamp as set forth in independent claims 1, 4, 10 and 18, as well as the dependent claims thereto.

Similarly, U.S. Patent No. 6,020,690 (Takeda et al.) neither discloses nor suggests the present claims of the application. This patent discloses an electrodeless discharge lamp which has an arc tube which seals at least rare gas and one of luminous metal and metal hylide thereinto. The various ceramic electrodeless discharge lamps shown in figures 1a, 1b and 1c are unlike the body for an electrodeless lamp as disclosed and claimed in the present application.

For all of the reasons set forth above, it is respectfully submitted that the present application as amended is in condition for allowance and such action is earnestly solicited.

Respectfully submitted,



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Alfred A. Fressola
Attorney for Applicant
Reg. No. 27,550

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
Bradford Green, Building Five
755 Main Street, P.O. Box 224
Monroe, CT 06468
Telephone: (203) 261-1234
Facsimile: (203) 261-5676
USPTO Customer No. 004955